

**MADISON HEIGHTS FIRE DEPARTMENT
FITNESS/WELLNESS PROGRAM:
FACTORS AFFECTING IMPLEMENTATION**

Strategic Management of Change

By: James E. Martin
Madison Heights Fire Department
Madison Heights, Michigan

An applied research project submitted to the National Fire Academy
as part of the Executive Fire Officer Program

July 1999

ABSTRACT

Historically, the city of Madison Heights, MI and its fire department had placed little, if any, significance on the fitness of their fire fighters. No employees were routinely required to submit to any physical examination or fitness assessment, except as required for specific licensing requirements dictated by outside agencies. In fact, a fire fighter could add a virtually unlimited amount of weight to his/her frame without fear of jeopardizing his/her job. Therefore, the problem faced by the Madison Heights Fire Department was how to ensure that the fire fighters it employed were physically capable of performing the tasks assigned to them.

The purpose of this applied research project was to examine those factors in existence that might influence the establishment of a fitness/wellness program in the Madison Heights Fire Department as well as to make recommendations for or against such a program as warranted.

A descriptive research methodology based on a survey of 50 Michigan fire departments was utilized. Answers were sought to the following research questions:

1. What factors currently exist for and against the implementation of a physical fitness program in the Madison Heights Fire Department?
2. If a physical fitness program was implemented in the Madison Heights Fire Department, should it be done on a mandatory or voluntary basis?
3. If a physical fitness program was implemented in the Madison Heights Fire Department, should it also include a wellness (educational) component?

For data collection purposes, an eight-question survey with cover letter and postage-paid return envelope was mailed to 50 Michigan fire departments that were either full-time paid departments or combination departments with a full-time complement of at least 50% of the

department's manpower. The goal of the survey was to elicit information on how many departments had fitness programs in place, whether or not participation in the program was mandatory and if the program included wellness education. Additional information on program specifics was also gathered.

Of the 50 surveys mailed, 44 were returned, which provided a response rate of 88%. The surveys revealed that 45.5% of the departments surveyed had a fitness program in place and 42.1% of those departments with a program required mandatory participation by their employees. Wellness education was included by 63.2% of departments with physical fitness programs.

Based upon the body of research compiled for this project and in response to the research questions established for it, the following recommendations were made:

1. It was recommended that the Madison Heights Fire Department endeavor to establish a fitness/wellness program without delay.
2. The program established by the Madison Heights Fire Department should require the mandatory participation of all uniformed members of the department.
3. The program established by the Madison Heights Fire Department should include a wellness (educational) component.

TABLE OF CONTENTS

ABSTRACT.....2

TABLE OF CONTENTS.....4

INTRODUCTION.....5

BACKGROUND AND SIGNIFICANCE.....7

LITERATURE REVIEW.....10

PROCEDURES.....14

RESULTS.....16

DISCUSSION / IMPLICATIONS.....21

RECOMMENDATIONS.....24

REFERENCES.....27

APPENDIX A (Madison Heights Fire Department Employee Roster).....29

APPENDIX B (Survey with Cover Letter).....30

INTRODUCTION

Fire fighting continues to rank among the most hazardous of occupations. Given the nature of the work performed by fire fighters coupled with the adverse conditions they encounter, this is hardly a surprise. Fire fighters face the hazards posed by smoke and fire every day in this country. They are confronted by hostile atmospheres, extremes in temperature, unseen and unknown hazards and are expected to abate any emergency they are faced with. Fire fighters are expected to be ready at a moment's notice, 24 hours a day, 365 days a year. In performing these duties, they are required to don an extra 50-60 pounds of personal protective equipment and work at high levels of exertion for extended periods of time. The fitness level of the men and women who perform these services must be considered to be a high priority. The problem faced by the Madison Heights Fire Department and fire departments across the nation is how to ensure that the men and women employed as fire fighters are physically capable of performing the tasks assigned to them.

The significance of fire fighter fitness can be clearly seen in line-of-duty death statistics. *Firehouse* (1999, July) cites a soon to be released report from the National Fire Protection Association (NFPA) that indicates 91 fire fighters died in the line of duty in the United States in 1998. The International Association of Fire Chiefs (IAFC) reports in *On Scene* (1999, July 15) that six fire fighters died in the line of duty just between June 10, 1999 and June 21, 1999. Four of the six fire fighters suffered a fatal cardiac arrest either responding to, at the scene of or shortly after working at an emergency incident.

The United States Fire Administration (1998, August) gives a more detailed account of fire fighter deaths in 1997, the last year for which such figures are currently available. In 1997,

94 fire fighters died while on duty in the United States. Over the last ten years (1988-1997), a total of 1,012 fire fighters died in the line of duty in the United States.

The 1997 statistics deserve a closer look. Emergency incidents accounted for 76 (81%) line-of-duty deaths. This includes responding to the incident, while at the incident scene as well as after the incident. Fireground operations accounted for the largest number of deaths, 41 (43.6%), and 21 of those fire fighters were engaged in advancing hose lines and/or fire attack at the time of their death. Responding to or returning from an alarm accounted for 20 deaths (21.3%). It must also be reported here that one fire fighter died during mandatory physical training (exercise).

Of the 94 fire fighters suffering line-of-duty deaths in 1997, the cause of the fatal injury for 40 (42.6%) of them was stress or overexertion. Of these 40 fire fighters, 36 died of heart attacks, two died of strokes and two died of heat stroke/exhaustion. In fact, those 36 heart attacks represent the leading nature of fatal injuries in 1997. Quoting from the 1997 report, the USFA states, "Fire fighting is extremely strenuous physical work and is likely one of the most physically demanding activities that the human body performs."

The purpose of this applied research project is to examine those factors currently in existence that might influence the establishment of a mandatory fitness/wellness program in the Madison Heights Fire Department and to make recommendations for or against such a program as warranted. Using a descriptive research methodology based on a survey sent to 50 fire departments in the state of Michigan, the research questions to be answered are:

1. What factors currently exist for and against the implementation of a physical fitness program in the Madison Heights Fire Department?

2. If a physical fitness program was implemented in the Madison Heights Fire Department, should it be done on a mandatory or voluntary basis?
3. If a physical fitness program was implemented in the Madison Heights Fire Department, should it also include a wellness (educational) component?

BACKGROUND AND SIGNIFICANCE

The city of Madison Heights, Michigan is a suburban community of 32,000 residents located two miles north of the city of Detroit. Madison Heights maintains a full-time, paid fire department of 39 sworn members operating out of two fire stations. The department provides fire suppression, advanced life support service with transport and hazardous materials response to an area of approximately 7.5 square miles.

In addition to the emergency services listed above, residents of the city also enjoy many non-emergency services. The department provides a public fire education program, reaching out to school age children, senior residents and the business community. Many of the fire fighters are actively engaged in providing residents with instruction in cardiopulmonary resuscitation and first aid training. Low-income and senior residents are eligible to receive smoke detectors as well as installation of the devices from the department at no cost. Free blood pressure screenings are offered daily at both fire stations.

Historically, the city of Madison Heights and its fire department have placed little, if any, significance on fire fighter fitness. In 1978, fire fighter hiring qualifications required applicants to be between the ages of twenty-one and thirty-one, possess a high school diploma or the equivalent as well as a valid vehicle operators license and have their weight in proportion to their height. On-duty fire personnel conducted pre-employment physical agility assessments

consisting of a prescribed number of sit-ups and push-ups, a climb up a ground ladder as well as a rope climb. However, once a candidate was hired, no physical standards or assessments were applied, not even the height/weight ratio! This meant that a candidate of average height and weight could add a virtually unlimited amount of weight to his/her frame without fear of jeopardizing his/her job.

Twenty years later, in 1998, candidate qualifications had changed somewhat. The minimum age requirement had been lowered to eighteen and in response to the Age Discrimination in Employment Act, a maximum age limit was no longer utilized. Candidates were required to possess State of Michigan Fire Fighter II certification as well as a valid State of Michigan paramedic license. Prior to employment, candidates were required to successfully complete a physical skills test battery. This test battery was comprised of seven components including an equipment carry, hose drag/couple, ladder operation, simulated rescue, hose pull, joist walk and forcible entry exercise. Each element was scored separately on a pass/fail basis and candidates were required to pass all seven elements. Following an offer for employment, candidates were required to successfully complete both a physical examination and a psychological evaluation. Due in part to the Americans with Disabilities Act, no mention of a height/weight requirement was made. More importantly, again in 1998 as in 1978, no measure of physical fitness was taken at any point after a newly hired employee walked through the door of the fire station. It makes little, if any, sense to test a candidate prior to his/her employment only to ignore that fire fighter's level of fitness for the remainder of his/her career.

The current collective bargaining agreement between the City of Madison Heights and the Madison Heights Fire Fighters Association provides that each employee may submit to a

physical examination each year and the employer shall assume all costs involved, not to exceed one hundred twenty-five dollars (\$125.00). It is important to note that the contractual language is permissive in nature. No employee of the fire department is routinely required to submit to any physical examination or fitness assessment, except as required for specific licensing requirements dictated by outside agencies.

Employers in general should be concerned about the physical well being of their employees. However, in an occupation as physically demanding as fire fighting, that concern is even more acute. The significance of this can be gleaned from a review of the department's employee roster (Appendix A). As of 5-1-99, the average age of a Madison Heights fire fighter was 39.1 years, with the oldest being 56 years of age and the youngest being 27 years of age. In terms of service, the average Madison Heights fire fighter had been on the job for 10.82 years, with the most senior fire fighter having 30 years of service and the most junior fire fighter having only two weeks of service. In other words, the average fire fighter in Madison Heights is almost forty years old. Coupled with the average years of service on this department, the average full-term (25 years) retiree would be almost 54 years of age before being eligible to retire. In that the nature of the fire fighting profession requires these people to work in extremes of temperature, at high levels of exertion for long periods of time and places them under a great deal of physical as well as mental and emotional stress, it is imperative that their level of fitness be a high priority.

According to the City of Madison Heights Finance Department, the Madison Heights Fire Department has experienced one fire fighter line-of-duty death since the city was incorporated in 1955. Fire Fighter Raymond Susko died on February 19, 1974 during fire suppression activities at the scene of a house fire. Mr. Susko's official cause of death was listed as acute congestive

heart failure, due to myocardial hypertrophy, dilation and fibrosis, due to physical exertion and exhaustion. Additionally, the city is currently paying duty-related disability pension benefits to four fire fighters, two of whom retired with back injuries, one with a shoulder injury and one with a pulmonary-related disability. Perhaps with a well-designed, thoughtfully implemented and carefully monitored fitness program, one or more of these fire fighters would still be providing productive service to the employer today.

The Strategic Management of Change course offered at the National Fire Academy in Emmitsburg, Maryland as part of the Executive Fire Officer Program provides a change management model utilizing a four-step approach consisting of analysis, planning, implementation and evaluation. This applied research project will draw from both the analysis and planning phases of the model and how they might impact implementation.

LITERATURE REVIEW

A review of current literature available on the broad topic of fire fighter fitness was undertaken at the Learning Resource Center of the National Emergency Training Center in Emmitsburg, Maryland. This literature review considered current articles in various fire-related publications as well as a number of research projects on the topic completed for the Executive Fire Officer Program.

There seems to be little disagreement in the literature as to the fact that fire fighting has been and continues to be an extremely physically demanding and hazardous occupation. Davis and Gerkin (1997, pg. 24) write, "The physical demands of fire suppression rank it among the most strenuous of occupations. The simple act of climbing stairs under load establishes a job-related criterion that exceeds the capacities of a significant portion of the general population." In a

similar vein, Beck (1994, pg. 42) offers, “In a profession where people are expected to go from a resting state to full maximum exertion in a matter of minutes, being physically fit is paramount.”

The need for fire fighters to possess a level of physical fitness that will permit them to perform the functions of their job seems readily apparent. If so, why would there be any resistance to mandating physical fitness training for fire fighters? Much of the resistance comes from the fire fighters. In 1997, the International Association of Fire Fighters (IAFF) and the International Association of Fire Chiefs (IAFC) produced the *Fire Service Joint Labor Management Wellness-Fitness Initiative*. Expressed in the mission statement of this initiative are many of the concerns expressed by fire fighters when faced with the prospect of mandatory physical fitness training. Specifically, the mission statement addresses such items as the confidentiality of all evaluations, that the programs must be positive and not punitive in nature, that the programs must allow for age, gender and position in the department and that once implemented, the programs must require the mandatory participation of all uniformed personnel in the department.

The subject of mandatory participation in physical fitness programs was written about extensively. The majority of the material reviewed was clearly in favor of mandatory programs. Fire fighters cannot benefit from programs they are not active participants in. In an article in support of mandatory programs, Goodson (1994, pg. 21) writes, “A high level of physical fitness is absolutely essential for fire fighters to be able to do their jobs safely and effectively, and it is as much a part of the job as training to fight fires or perform extrication.” Goodson (1994) states further, “In my opinion, *only* mandatory programs will work because the reality is that those who need to exercise the most, those in poor physical condition, are the ones who are least likely to

participate in a voluntary program.” Likewise, Walterhouse (1996, pg. 1) adds, “Unfortunately, many individuals are not motivated to exercise on their own. It is, therefore, important that physical fitness programs in the fire service be mandatory, and incentives for participation and goal attainment be considered.” Davis (1997, pg. 26) cuts right to the quick with his opinion, “We’re never going to get with the program until we’re mature enough to accept that fitness is an unconditional component of the job.”

The results and benefits of mandatory programs were also discussed. Lautner (1998, pg.52) reported on the mandatory fitness program at the Range Complex Fire Department in Mercury, Nevada. “Personnel were given a thirty month phase-in period to meet the minimum acceptable standards set forth by the chief. Current levels are at ninety percent at or above accepted minimum fitness standards.” Included in the same report Lautner (1998) states that, “Ninety-two percent (53 of 59) felt they had benefited from participation in the fitness program.” The Tulsa, Oklahoma Fire Department implemented a mandatory physical fitness program in February 1985. Data was collected for the four years prior to implementation and the four years following implementation. Specific categories examined included lost-time days, number of injuries, medical payments, number of workers’ compensation cases and workers’ compensation settlements (dollar amounts). In reporting on the findings from Tulsa, Goswick (1994, pg.21) offered the following results: lost-time days decreased 35.8 percent, medical payments dropped by 59.2 percent, workers’ compensation cases filed decreased by 47.1 and settlements decreased 28.2 percent. Injuries increased by 20.7 percent. However, analysis revealed that the number of injuries reported increased primarily due to injuries sustained during physical training, but the severity of those injuries reported decreased.

The literature review revealed almost unanimous support for physical fitness training for members of the fire service. However, many programs stopped at physical activity and failed to incorporate any educational or behavioral components (wellness). On this subject, Pearson (1994, pg. 45) writes, “It’s not enough to be strong and have good endurance if you live on french fries and candy bars, or you’re losing a battle with chemical dependency.” Healy (1993, pg.22) also concurs that fitness programs are only a part of the solution. He adds, “The overlooked factor is that a person can be physically fit and not healthy.”

The joint IAFF/IAFC project addressed the wellness issue in a comprehensive fashion by including a behavioral health component. It urges the use of a behavioral health specialist, ideally a psychologist or a counselor with a Master’s degree and several years of experience in occupational counseling. The behavioral health section lists chemical dependency, substance abuse, smoking cessation, stress management, nutrition, family relations, infectious disease, and spiritual needs among the wellness components.

This applied research project was undertaken with an interest in establishing a mandatory fitness/wellness program in the Madison Heights Fire Department. The literature review has done nothing to diminish that interest. Article after article reinforced the need for fire fighters to execute the duties assigned to them while maintaining a high level of personal fitness. In addition, it appears from the review of available literature that mandatory programs best serve the needs of the fire service. Further, the literature revealed that programs that stop at physical fitness fall short of meeting the needs of the individual. A wellness component that educates the individual on all aspects of a healthy lifestyle is a key ingredient of a successful program.

PROCEDURES

For data collection purposes, an eight-question survey with cover letter and postage-paid return envelope was mailed to 50 fire departments in the state of Michigan (Appendix B). The departments selected were either completely full-time, paid departments or combination full-time and part-paid departments with a significant (at least 50%) full-time complement.

Specifically, the survey sought to determine how many of these departments now had a fitness program in place, whether participation in the program was mandatory or voluntary as well as other pertinent information on fitness testing, scheduled training, incentives for participation and wellness education. In addition, the survey provided respondents with space to offer supplemental information they felt might be useful in understanding the fitness program in their department.

Population

A total of 50 surveys were mailed on March 26, 1999. Names and addresses for those departments were obtained from the *1998 Michigan Fire Service Directory*. Departments selected to receive a survey were either full-time paid departments or departments with at least 50% of their members being of full-time status.

Instrumentation

A two-page, eight-question survey along with cover letter and postage-paid return envelope was sent to the selected population. Those departments receiving a survey were also provided with a comment section for any supplemental information they deemed appropriate. Respondents were given the opportunity to provide their replies in complete confidence though many elected

to identify themselves. The cover letter informed recipients that the purpose of the survey was to elicit information in an effort to establish a mandatory fitness/wellness program in the Madison Heights Fire Department. Recipients were also clearly informed that their responses would be used in an applied research project for the Executive Fire Officer Program at the National Fire Academy in Emmitsburg, Maryland.

The Instrument

Questions 1-2. Question 1 asked whether or not the department surveyed had a physical fitness program. Respondents who answered “No” to Question 1 were asked to stop at that point and return the survey in the postage-paid envelope provided. Those respondents who answered “Yes” to Question 1 were then asked in Question 2 if the program was mandatory or voluntary.

Questions 3-4. Question 3 sought information on whether or not employees were tested or evaluated at regular intervals while Question 4 asked for details on what those intervals were.

Question 5. Question 5 asked if fitness training was scheduled into the fire fighter’s workday.

Question 6-7. Question 6 asked if employees received any type of incentive for reaching and/or maintaining prescribed fitness goals. Question 7 sought information on what type of incentives were offered.

Question 8. Question 8 sought to determine if departments utilized a wellness component in conjunction with their fitness program. Several examples of wellness classes were listed.

Assumptions and Limitations

In this research project, surveys were sent only to fire departments within the state of

Michigan. It was felt that this population would hold the greatest significance for the Madison Heights Fire Department as the departments surveyed were all subject to the same state regulations and labor law climate.

One department that responded to the survey answered “Yes” to Question 1, but failed to answer all other questions. Therefore, all results listed beyond Question 1 are taken from 19 “Yes” responses as opposed to the 20 actually received.

Definition of Terms

Wellness- For purposes of this project wellness is defined as an educational component of a fitness program designed to educate the employee and further his/her understanding of the total concept of physical fitness, health and well being. Examples include nutrition education, stress management and smoking cessation education.

RESULTS

On March 15, 1999, an eight-question survey was mailed to 50 Michigan fire departments. The fire departments selected to receive a survey were either full-time, paid fire departments or had a contingent of full-time firefighters equal to at least 50% of the department’s manpower. Department’s surveyed were asked to respond by April 15, 1999. Of the 50 surveys sent, 44 were returned, providing a response rate of 88%.

The first research question in this project dealt with existing factors for and against the implementation of a physical fitness program in the Madison Heights Fire Department. While many of these factors exist in regulations and collective bargaining agreements, question one of the survey sought information on how many departments had a program in place at this time. Of

the departments responding, 45.5% (20 of 44) answered in the affirmative. In that all of the departments surveyed were located in Michigan, it is clear that nearly half of those responding had found a way to establish a fitness program in their department. However, on this same topic, a review of specific comments from responding departments revealed that budgetary constraints and even a municipality's workman's compensation insurance carrier were cited as reasons for not establishing or maintaining a physical fitness program.

The second research question sought to determine that if such a program were to be implemented, should it be done on a voluntary or mandatory basis? As was noted earlier, one respondent answering in the affirmative to question one of the survey failed to answer the remaining questions. Therefore, the remaining results will utilize 19 "Yes" responses for all percentages. Of the 19 departments responding to question two of the survey, 42.1% (8 of 19) required mandatory participation by their employees. Even though less than half of the departments responding maintain mandatory fitness programs, the majority of the material reviewed for this project clearly supported the notion of mandatory participation.

Survey questions three through seven were designed to gain additional information about existing programs in the event that a program was implemented in the Madison Heights Fire Department. Question three sought information on whether members were tested or evaluated at regular intervals. Of the 19 departments responding, 42.1% (8 of 19) test their members at regular intervals. It is interesting to note, however, that while the percentage is exactly the same for those departments with mandatory programs, not all departments with mandatory fitness programs require their members to undergo regular testing or evaluation. Question four asked what interval was used for testing or evaluation. The most common response was annual testing,

with 75% (6 of 8) of departments testing their members in this time frame.

Question five asked departments if time for fitness training was scheduled into the workday. Of the 19 responding departments, 68.4% schedule fitness training into the workday. This includes all eight departments with mandatory programs and five with voluntary programs.

Questions six and seven dealt with the notion of incentives for reaching or maintaining prescribed fitness levels. Only one department of the 19 responding (5.2%) offered any type of an incentive. Question seven identified that incentive as recognition awards for personal accomplishment.

The third research question in this project sought to determine if a wellness component should be included in any program implemented in the Madison Heights Fire Department. Survey question eight asked those departments with fitness programs if they incorporated a wellness component in the program. Notably, 63.2% (12 of 19) of departments with fitness programs saw fit to utilize a wellness component.

The results of the survey conducted for this research project seem to mirror much of the published material that was reviewed previously. Less than half of the departments surveyed currently have a physical fitness program in place. Of those departments with a program in place, less than half of those require mandatory participation by their employees and again, less than half of those departments with a program in place subject their employees to regular testing or evaluation. However, it is significant to note that nearly two-thirds of the departments with fitness programs do incorporate a wellness component, the one area cited where many programs fall short.

Survey Results

Number of surveys mailed (Population).....50
 Number of surveys returned (Sample).....44 (88%)

1. Does your department have a physical fitness program?

Yes - 20

No - 24

2. Is your physical fitness program mandatory or voluntary?

Mandatory - 8

Voluntary - 11

3. Are members tested/evaluated at regular intervals?

Yes - 8

No - 11

4. If so, at what interval are members tested/evaluated?

Quarterly - 0

Semi-annual - 0

Annual - 6

Other – 2 (every 2 years)

5. Is fitness training scheduled into the firefighter's workday?

Yes - 13

No - 6

6. Do firefighters receive any type of incentive for reaching/maintaining prescribed fitness goals?

Yes - 1

No - 18

7. What incentives are offered?

Leave time - 0

Cash awards - 0

Other – 1 (recognition awards)

8. Is there a wellness component to your fitness program? (Example: nutrition education, smoking cessation classes, stress management, etc.)

Yes – 12

No - 7

- One respondent answering Question 1 in the affirmative failed to answer all other questions.

Specific comments provided by respondents-

“We are implementing the Joint IAFF/IAFC Wellness/Fitness Initiative July, 1999.”

“Recently established wellness program will include a screening (physical) program.”

“Program was developed by contractual language – Union was given the task of presenting their desires to township.”

“We, along with our police department, considered a mandatory fitness program for all new hires (after a target date) but our workman’s compensation insurance carrier discouraged such a plan.”

“We do not have a program per se. We provide YMCA memberships.”

“Program developed jointly with labor, management and a third party provider. Program failed second year due to budget cutbacks.”

“Can’t test at this point because of contractual restrictions.”

“Workout areas and equipment provided at all stations.”

“Program was started many years ago as an employee initiative. City has invested in quality physical fitness equipment and encourages fire fighters to work out during the work day.”

DISCUSSION/IMPLICATIONS

This research project does not represent the first attempt to establish a mandatory physical fitness/wellness program in the Madison Heights Fire Department. In 1998 city administrators, the fire chief and representatives of the fire fighters association held talks on just such a program. A representative from a local health care facility drew up a sample fitness/wellness program. The program was based on gathering baseline fitness information including height, weight, blood pressure, resting pulse rate, flexibility and body composition. After this data was collected, individualized fitness prescriptions were to be given to each employee. Included in the proposal was a wellness component that included nutrition education, stress management, motivation, cooking demonstrations, yoga and spirituality classes. The initial proposal made to the fire fighters included a personal evaluation after three months and an evaluation of the program after one year. Participation would be mandatory for all fire department personnel including the chief. This proposal was rejected by the fire fighters though there was interest in the program from a number of their members.

The program was then submitted to the fire fighters a second time. This proposal sought participation by 80% of their membership in order to launch the program. Again evaluations would take place at the three and twelve month marks. If after one year the program was proving to be successful, mandatory participation by 100% of the department would become effective. Once again the fire fighters rejected this proposal. The most commonly cited reasons were fears about the confidentiality of personal data and fears that the program would be utilized in some sort of punitive fashion. Goodson (1994, pg.21) addressed this situation directly. "The fire fighters' union may also oppose a mandatory program because some mechanism must be built in

to deal with those fire fighters who cannot or will not meet the fitness standards adopted by the department.... To protect their members' rights, the union would apparently prefer to see someone risk death by continuing to fight fire when they are medically unfit to do so than to have a fitness program expose the problem so that it can be corrected..."

Reluctance on the part of the fire fighters to buy into a mandatory program is perhaps the primary but not the only existing factor against implementation of a fitness program. Collective bargaining laws in Michigan include the right to binding arbitration. The collective bargaining agreement between the City of Madison Heights and the Madison Heights Fire Fighters Association contains a "maintenance of conditions" clause which states in essence that changes in wages, hours and working conditions are subject to the collective bargaining process. In fact, in a Michigan court case on this very topic, *Meridian Twp. v. Fire Fighters Assn. of Mich.*, the Michigan Employment Relations Commission upheld the decision of an administrative law judge who ruled that, "Management had a duty to bargain with fire fighters' union before implementing a mandatory agility test, where discipline could be imposed on those who declined to participate."

While these factors, fire fighter resistance, collective bargaining and labor law make implementation difficult to accomplish, there are several factors that favor establishment of a fitness program. The first is also the fire fighters. Though both proposals offered to the fire fighters met with rejection, this should not be meant to imply that rejection was 100%. A significant number of the fire fighters said they favored such a program and would participate in a mandatory program. Currently, a number of the fire fighters engage in regular fitness workouts at the fire stations with equipment purchased by both the fire fighters and the city.

There are also regulations and standards that suggest that perhaps employers who do not have mandatory programs in place are remiss in not doing so. Michigan is a state that recognizes the Occupational Safety and Health Administration (OSHA). The Michigan Occupational Safety and Health Administration (MIOSHA) administers through the Department of Labor, safety standards for fire fighting known as *Part 74*. Under the Duties of Employer section (R408.17411) section (1) subsection (a) reads, “An employer shall comply with all of the following requirements: Provide training to an employee commensurate with those duties and functions that the employee is expected to perform. Such training shall be provided before the employee is permitted to perform emergency operations.” While there is general agreement that this section can be interpreted to mean that if an employer expects a fire fighter to perform at a hazardous materials incident, then the employer is responsible for providing training to the employee in the handling of haz-mat incidents. Why then should the same interpretation not apply to physical training? If an employer expects a fire fighter to lift heavy hose lines, carry victims from burning buildings or operate under extreme conditions for extended periods of time, doesn’t that employer have the same obligation to make certain that fire fighter is physically capable of executing those responsibilities?

The National Fire Protection Association (NFPA) weighs in on this issue with a number of its standards. NFPA 1201, *Standard for Developing Fire Protection Services for the Public* states in section 7-2.4.2 that, “All fire department members shall be physically fit for the duties they are expected to perform...The fire department shall adopt a mandatory physical fitness program that addresses the particular demands of fire department activities.” NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program* goes much farther. Chapter 8 of this

standard deals with medical and physical requirements. Section 8-2.1 states, “The fire department shall develop physical performance requirements for candidates and members who engage in emergency operations.” Section 8-2.4 reads, “Members who engage in emergency operations shall be annually evaluated and certified by the fire department as meeting the physical performance requirements specified in 8-2.1 of this section.” Section 8-3.1 goes on to say, “The fire department shall establish and provide a physical fitness program to enable members to develop and maintain an appropriate level of fitness to safely perform their assigned functions.” Finally, section 8-3.2 sums it all up by stating, “The fire department shall require the structured participation of all members in the physical fitness program.”

It is recognized here that the NFPA standards are precisely that, standards. They are not laws. However, in almost every other case in the fire service these standards are treated as laws. Many communities adopt NFPA standards as part of their code of ordinances. When a fire marshal has a question about sprinkler systems or places of public assembly, the first place he/she turns to is the appropriate NFPA standard. Why then should we not hold ourselves to these very standards when we are talking about the men and women who day in and day out risk their lives in service to others?

RECOMMENDATIONS

The recommendations that follow are based upon the body of research compiled for this project and are made in response to the research questions established for it. They take into account the wealth of published material available on the subject that was reviewed for this work. The needs of the department as well as those of the individual fire fighters are given

equal consideration here. It is also imperative that the Madison Heights Fire Department act in a responsible manner as it seeks to protect the lives of the citizens it serves. Due consideration must certainly be given to published standards of performance that guide the fire service on a daily basis.

1. It is recommended that the Madison Heights Fire Department endeavor to establish a fitness/wellness program without delay. While it is recognized that a number of factors both for and against the establishment of a fitness/wellness program exist, it is apparent that the benefits of establishing a program exceed the risks of failing to do so. This matter has already been the topic of some discussion between the administration and the fire fighters' union. It is suggested that these talks be reopened. Employee buy-in of the program may well add to its success but implementation of the program should occur with or without the union's endorsement. The standards that are put forth in the NFPA documents as well as the MIOSHA regulations place the onus for implementation squarely on the department's shoulders.

2. It is recommended that the program established by the Madison Heights Fire Department require the mandatory participation of all uniformed members of the department. This recommendation is based largely on the NFPA and MIOSHA documents. However, most of the literature reviewed in this project supports this recommendation. Mandatory participation assures that all members, especially those in need of improving their physical condition will reap the benefits of the program. While a mandatory program is recommended here, implementation must consider the current physical condition of every member of the department and must be weighed against the historic failure of the department to address the physical condition of its fire service employees. It must also be recognized that the establishment of any type of fitness

program will represent a cultural change in the organization. Implementation of this program must occur over a sufficient period of time to allow those members of the department currently in need of improving their physical state the time and opportunity to do so. Further, this program should address the individual needs of the members and be based upon individualized fitness prescriptions and programs.

3. It is recommended that any program implemented in the Madison Heights Fire Department include a wellness component. Educating employees in a healthy lifestyle serves as the proper adjunct to the mandated physical fitness training. Those classes previously discussed with the fire fighters union should be utilized. In those earlier talks it was also suggested that employee spouses would be allowed to participate in the wellness classes. This concept is worth further exploration as a way to maintain compliance with the program when the fire fighters are away from the fire station and to provide additional positive reinforcement.

REFERENCES

- Beck, R. (1994, July). Fitness Under Fire: The Upper Arlington Daily Fitness Program. *The Voice*, 42-44.
- Davis, P. (1997, March). Scientific Research Yields 7 Practical Tips. *Fire Chief*, 26-30.
- Davis, P. and Gerkin, R. (1997, July). Exercise Programs Need Validated Tests. *Fire Chief*, 24-26.
- Firehouse* (1999, July). Firefighter Line-of-Duty Deaths Down for Fourth Straight Year, 8.
- Goodson, C. (1994, Fall/Winter). Fire Service Fitness Programs: Voluntary or Mandatory? *Speaking of Fire*, 19-21.
- Goswick, W. (1994, Summer). Physical Fitness and Workers' Compensation: A Review of Tulsa Fire Department Data. *Speaking of Fire*, 20-22.
- Healy, T. (1993, October). Maintaining Health in Today's Fire Service. *The Voice*, 21-22.
- Lautner, D. (1998). *Firefighter Physical Fitness Programs: Looking for a Standard*. Report. National Fire Academy. Emmitsburg, MD.
- Meridian Twp. v. Fire Fighters Assn. Of Michigan, MERC No. C95-H-174, 9 MPER (LRP) 27,057.
- Michigan Department of State Police Fire Marshal Division. (April, 1998). *1998 Michigan Fire Service Directory*.
- National Fire Protection Association (1994). *NFPA 1201 Standard for Developing Fire Protection Services for the Public*. Quincy, MA. 1201-9.
- National Fire Protection Association (1997). *NFPA Standard on Fire Department Occupational Safety and Health Program*. Quincy, MA. 1500-21.

On Scene (1999, July 15). Fire Service Fatalities, 5.

Pearson, J. (1994, February). Beyond Fitness: The Case for Wellness Training. *Fire Chief*, 45-47.

United States Fire Administration Federal Emergency Management Agency. (1998, August). *Firefighter Fatalities in the United States in 1997* (Contract Number EME-98-SA-0083).

Walterhouse, G. (1996, April). Benefits of Mandatory Physical Fitness Programs, Part I. *Health & Safety for Fire and Emergency Service Personnel*, 1-5.

Walterhouse, G. (1996, May). Benefits of Mandatory Physical Fitness Programs, Part II. *Health & Safety for Fire and Emergency Service Personnel*, 8-12.

APPENDIX A
Madison Heights Fire Department Employee Roster

RANK	NAME	DATE HIRED	BIRTHDAY
FIREFIGHTER	GUSTAFSON, EDWARD	7/01/68	4/15/43
FIRE MARSHAL	MCCLURG, JOSEPH	7/29/74	11/06/45
LIEUTENANT	BANISH, DAVID	7/29/74	6/27/47
SERGEANT	ROTH, PATRICK	10/29/75	7/24/47
LIEUTENANT	BRADLEY, MICHAEL	3/01/77	7/02/47
CHIEF	MARTIN, JAMES	5/22/78	12/31/54
SERGEANT	DONAHUE, RICHARD	9/05/78	12/03/53
LIEUTENANT	SCHEID, KEVIN	2/01/82	6/12/58
SERGEANT	JONES, KENNETH	5/14/84	7/27/60
SERGEANT	BOOZER, DONALD	5/14/84	8/30/55
FIREFIGHTER	LESSNAU, JEFFREY	1/14/85	10/26/61
FIREFIGHTER	MCCRACKEN, CHRIS	1/27/86	11/19/61
FIREFIGHTER	JOYCE, JON	3/31/86	12/28/55
FIREFIGHTER	BELICA, MICHAEL	3/31/86	10/27/58
SERGEANT	HAUTALA, JOHN	9/01/86	12/04/58
SERGEANT	HUTCHESON, MARK	10/13/86	9/20/64
FIREFIGHTER	KENNY, STEVEN	8/07/89	6/22/58
FIREGIGHTER	FRAKES, CARL	8/07/89	7/08/62
FIREFIGHTER	FENNER, TERRY	8/07/89	9/01/55
FIREFIGHTER	BRINK, MICHAEL	8/14/89	3/10/63
FIREFIGHTER	EHKRE, MARK	9/18/89	9/18/65
FIREFIGHTER	BRAZEN, EDWARD	8/13/90	7/24/54
FIREFIGHTER	BIST, DALE	10/29/90	12/27/61
FIREFIGHTER	HOAG, MICHAEL	1/07/91	8/26/65
FIREFIGHTER	KENNEDY, TIMOTHY	2/04/91	1/03/63
FIREFIGHTER	GARVEY, DANIEL	2/04/91	6/14/65
FIRE INSPECTOR	OWENS, CARMONE	9/03/91	2/20/67
FIREFIGHTER	KNIGHT, SHAWN	9/30/91	9/20/65
FIREFIGHTER	MORGAN, JOHN	9/30/91	6/20/66
FIREFIGHTER	STEFANKA, MICHAEL	9/30/91	4/02/61
FIREFIGHTER	BROCKMANN, HAROLD	11/04/91	4/01/54
FIREFIGHTER	ASHER, MICHAEL	3/01/93	12/06/56
FIREFIGHTER	ELLIS, ROBERT	6/14/93	3/13/54
FIREFIGHTER	POERTNER, PETER	11/25/96	7/21/64
FIREFIGHTER	OKE, WILLIAM	2/10/97	9/26/66
FIREFIGHTER	LELITO, GREGORY	9/29/97	8/11/71
FIREFIGHTER	SCHULTZ, MICHAEL	11/24/97	10/07/71
FIREFIGHTER	LAIRD, MICHAEL	12/07/98	11/30/64
FIREFIGHTER	POWERS, KEVIN	04/12/99	07/04/70

APPENDIX B
Survey with Cover Letter

(Letterhead)

Date: March 15, 1999

Dear Colleague:

As Chief of the Madison Heights Fire Department, the health, safety and welfare of my employees are prime concerns. I am interested in establishing a mandatory fitness/wellness program for the uniformed members of the Madison Heights Fire Department.

To this end, I would sincerely appreciate a few minutes out of your busy schedule to fill out the enclosed questionnaire and return it to me in the enclosed postage-paid envelope.

Information obtained from this survey will be helpful to me in two ways. First, it will help me to assess programs already in place in other departments and may well help in the design of any program established in Madison Heights. Second, I will use your *confidential* responses in an applied research project for the Executive Fire Officer Program at the National Fire Academy in Emmitsburg, Maryland. As you may know, original research is a key component of these projects. Therefore, your survey responses will be a critical part of this project.

I would appreciate it if you would return the survey no later than April 15, 1999. Thank you for your time and consideration.

Respectfully,

James E. Martin
Fire Chief

FIRE DEPARTMENT PHYSICAL FITNESS PROGRAM SURVEY

Instructions: Please answer the questions below concerning the physical fitness program in your department. Place an "X" in the appropriate box for each of the survey questions. Thank you for your time and input.

1. Does your department have a physical fitness program?

YES

☐

NO

☐

NOTE: If you answer no to Question #1, please stop at this point, place your survey in the enclosed, self-addressed stamped envelope provided and mail it back. Even if you only answer Question #1, your response is an integral part of this project. **THANK YOU.**

2. Is your physical fitness program mandatory or voluntary?

MANDATORY

☐

VOLUNTARY

☐

3. Are members tested/evaluated at regular intervals?

YES

☐

NO

☐

4. If so, at what interval are members tested/evaluated?

QUARTERLY

☐

SEMI-ANNUAL

☐

ANNUAL

☐

OTHER

5. Is fitness training scheduled into the firefighter's workday?

YES

☐

NO

☐

6. Do firefighters receive any type of incentive for reaching/maintaining prescribed fitness goals?

YES

☐

NO

☐

7. What incentives are offered?

LEAVE TIME

CASH AWARDS

OTHER

8. Is there a wellness component to your fitness program? (Example: nutrition education, smoking cessation classes, stress management, etc.)

YES

NO

Please use the remainder of this page, if necessary, to provide any supplemental information you believe would be useful in understanding your department's fitness program.

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

YOUR TIME AND EFFORT IN FILLING OUT THIS SURVEY ARE SINCERELY APPRECIATED.